A CHANGE NEEDED IN COUNTRY SCHOOL METHODS.

Address by Dr. John Graham Brooks, of Cambridge, Mass., Before the Recent Conference for Education in the South.

Look with me into an average school-house. Its arithmetic, its geography, its penmanship, its book-keeping, its reading-book appeals to the imagination of the farmer's child, are still dominated by clerk and trading point of view.

DISCONTENT WITH COUNTRY LIFE.

As one listens to the teaching, it is as if the one object were to create discontent with the country life; to make every bright boy and girl hate their surroundings. The instruction seems to assume the failure of the farm life. The inexhaustible charm and resource of the country has no part in this teaching. It is the more surprising because a body of the richest material for object lessons has now been gathered. Methods of instruction have been perfected and popularized so that no excuse is at hand. Forestry, horticulture, the physiology of plant life, chemistry as applied to the "intensive culture," carry with them an interest and enthusiasm that applied science rarely fails to inspire. This is no longer doctrinaire speculation; the proofs are before us in many places, that these things may be taught with telling effect to youth of average parts. Grasses, flowers, trees, fertilizers, soils, the preparation of foods, open up a world of enchantment that might transfigure country life.

COUNTRY SCHOOL METHODS OUT OF DATE.

What can be said for a copy-book schooling which gives the rustic no fitter ideal than the spruce clerk of the city store, that gives him neither mastery nor joy in his work, that shuts out every delight which easy and now accessible science may lend to life upon the farm? "Education the great remedy." Yes, but that kind of education that trains to effectiveness and pride in the tasks one has to perform; otherwise, it is not education, but balked and disfigured life. The truth about instruction in the rural districts is that it is as much out of date as the spinning-wheel or the whale-oil lamp. The conditions of vigorous growth in transportation and large industries are now known. The machine is torn out and cast aside three and even four times in a single generation. To keep old machinery is to be beaten in the race. The necessity of the readjustment of ways and means in education is at least as great, but the teaching of the country school lumbers on as absurdly out of relation to the new needs there as the coach of other days to the exigencies of modern travel.

THE DIGNITY OF SCIENTIFIC FARMING.

If I had some magic gift to bestow it would be to make our country youth see one truth, namely: that science as applied to the farm, the garden and the forest has as splendid a dignity as astronomy; that it may work just as many marvels and claim as high an order of talent. People are still incredulous when they hear for the first time what scientific training may mean as applied to the commonest and poorest lands.

I saw two years since among the sands of the Ardennes waste places that had ben turned into luxuriant gardens, heavy with dainty fruits. The prodigy has been made easy by science. The development of farming stations, the traveling instructor, a dozen years of experimenting, popularized by private associations and by the State, have brought both theory and practice within the reach of all. That the subtle processes of chemistry can turn the waste of the tannery, the saw-mill, the hemp factory and the abattoir into the richest dyes and fertilizers, delights the mind, as it does to hear that a modern Prospero, like Lord Kelvin, should transmute the smut and refuse of Shoreditch alleys into cheap and pleasant light for the surrounding dwellings of the workingmen.

THE PROFIT OF AGRICULTURE.

There is, perhaps, no story more fascinating to the imagination than that which in recent years tells the rise of "intensive culture" as used in the gardens and upon the farm. The exploits of scientific tillage in Belgium, the Jersey Islands, about Paris, and in our own country, read like a sorcerer's book. Who would believe that eight splendid crops could be taken from the same piece of land in the same year? We are told that seventeen square miles are used to support a single Indian if he lives by hunting. This is one extreme. The other extreme shows the possibilities of science and education. In the fields of one of the Jersey Isles, a population of thirteen hundred to the square mile is now well nourished. In one case, seventeen square miles is necessary for a single life—in the other, a single square mile maintaining thirteen hundred, or twenty-one thousand times as many, in far greater luxury.

Here in degree and in kind is a ratio of progress so startling that it upsets all the older calculations about the race in its food relations. We were taught to think that the amount of land area, its climate, fertility and nearness to the market, were of fundamental consequence. It now appears that every one of these conditions is likely to prove of relatively slight importance. As for climate, much of the most astonishing husbandry goes on in regions wholly unblessed by any unusual advantages, as in Vosges and in parts of Flemish Belgium. The Swiss, upon a poor soil, have quadrupled the hay tonnage.

Let me give a single quotation from a man of science about this work near Paris: "Fifty years ago the 'culture maraichere' was quite primitive. But now the Paris gardener not only defies the soil—he would grow the same crops on an asphalt pavement—he defies climate. His walls, which are built to reflect light and to protect the wall-trees from the northern winds, his wall-tree shades and glass protectors, his frames and pepinieres have made a real garden, a rich southern garden, out of the suburbs of Paris. He has given to Paris the 'two degrees less of latitude' after which a French scientific writer was longing; he supplies his city with mountains of grapes and fruit at any season, and in the early spring he inundates and perfumes it with flowers. The culture of plain vegetables on a large scale is spreading every year, and the results are so good that there are now practical maraichers who venture to maintain that if all the food, animal and vegetable, necessary for the 3,500,000 inhabitants of the departments of Seine and Seine-et-Oise had to be grown on their own territory, it could be grown without resorting to any methods of culture than those already in use."

THE SITUATION THAT COMFORTS US.

The great educational lesson of the new century will be to show us the range and application of this principle of the "intensive culture." To learn and to teach all that this means of economic and political independence is a need almost as pressing at the North as at the South. Wherever the first surface richness of the soil has ben wasted there is neither real freedom nor progress for you or for us apart from this new culture. Its beginnings are in such splendid evidence in your midst that a troop of Northern educators are constantly coming hither, not first to teach but first to learn. It is not the old cry, "Back to the land," but "Forward to science."